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UNITED STATES DEPARTMENT OF AGRICULTURE
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BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
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In cooperation with State, Federal and Other Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING JULY 16, 1948
(Ninth Cotton Insect Survey Report for 1948)

No shortages of insecticides for cotton insect control have been reported. Insecticides are now being applied in cotton fields in at least 12 of the leading cotton-growing States.

In most areas where the boll weevil occurs, July and August are the critical months. The fields should be thoroughly examined every 5 or 6 days to determine not only the abundance of boll weevils but also of bollworms, aphids, red spiders, cotton leafworms, plant bugs, stinkbugs, and other pests that may seriously reduce the yield or injure the quality of the cotton crop.

The bollworm is getting serious in Texas. Cotton growers now have effective insecticides for use against this pest, but they must be applied while the worms are small and repeated as often as necessary.

All of the "bollworms" submitted this season from States except Texas have proved to be insects other than the real bollworm. The tobacco budworm, *Heliothis virescens* (F.) is frequently mistaken for the bollworm during June.

The cotton leafworm moths may not spread beyond Texas for several weeks, or they may spread rapidly to other States. All "worms" collected on cotton should be submitted for identification.

As usual during July, the little corn silk beetle has made its appearance. It has been reported only from Jackson Parish, Louisiana. It is capable of causing serious damage to cotton and may appear in any area where cotton is grown.

Excerpts relating to cotton insects and their control taken from the WEEKLY COTTON WEATHER BULLETIN, issued by the Weather Bureau, U.S. Department of Commerce, New Orleans, La., for the week ending July 20, 1948:

TEXAS: "Insect damage limited."

OKLAHOMA: "Weather moderately favorable for weevil activity."

ARKANSAS: "Weather very favorable for weevil activity in much of State."

GEORGIA: "Weather very favorable for weevil activity."

SOUTH CAROLINA: "Weather favorable for weevil activity."

NORTH CAROLINA: "Weather favorable for holding weevil in check."

ARIZONA: "Some beet armyworm infestation in Pima County causing dropping of bolls."

CALIFORNIA: "Cotton dusting continues."

BOLL WEEVIL

TEXAS: Most cotton throughout central Texas has made a rank, succulent growth as a result of recent rains and many fields need dusting for weevil control. The average boll weevil infestation in 617 fields in 38 counties was 18% punctured squares as compared to 15% the previous week and 13% two weeks ago. No punctured squares were found in 108 fields examined. In 202 fields the infestations ranged up to 10%; in 139 fields from 11 to 25%; in 104 fields from 26 to 50%; and in 64 fields more than 50% of the squares were punctured.

OKLAHOMA: Local rains and mild temperatures were favorable for weevil development and first generation weevils are emerging from cotton squares in many fields. The average boll weevil infestation in 121 fields in 19 counties was 16% as compared to 8% a week ago. No punctured squares were found in 6 fields in Haskell, Pittsburg, and Garvin Counties. In 56 fields the infestations ranged up to 10%; in 35 fields from 11 to 25%; in 16 fields from 26 to 50%; and in 8 fields in Okfuskee, Choctaw, and McCurtain Counties more than 50% of the squares were punctured.

LOUISIANA: Boll weevil infestations continued spotted throughout the State. In areas where rains occurred the infestations increased during the week, while in the dry areas they remained about the same as the previous week. In 306 cotton fields in 16 parishes the average boll weevil infestation was 14% punctured squares as compared to 11% the previous week and with 21% at this period in 1947 and 49% in 1946. No punctured squares were found in 41 of the fields examined. In 136 fields the infestation ranged up to 10%; in 77 fields from 11 to 25%; in 37 fields from 26 to 50%; and in 15 fields in Bossier, Natchitoches, St. Landry, Acadia, and Lafayette Parishes more than 50% of the squares were punctured.

In Madison Parish near Tallulah, 410 cotton squares were collected from the ground in 3 fields and examined, finding 73% of the boll weevil stages alive and 27% dead. In 240 squares collected from the plants in those three fields, 90% of the stages were alive and 10% dead.

ARKANSAS: Rains and mild temperatures were favorable for weevil development. In 67 fields in 6 southeastern counties the average boll weevil infestation was 7% as compared to 4% the previous week and with 30% at this period in 1947 and 15% in 1946. No punctured squares were found in 27 of the fields examined. In 25 fields the infestations ranged up to 10%; in 10 fields from 11 to 25%; and in 5 fields in Chicot and Desha Counties more than 25% of the squares were punctured.

MISSISSIPPI: Boll weevils were found in 295 of 486 fields in 48 counties, or in 60% of the fields examined as compared to 50% the previous week. The average percent of punctured squares was 14%, the same as last week, and compares with 24% one year ago. Infestations above 25% punctured squares and considered ready for poisoning were found in one or more fields in Carroll, Chicasaw, Hinds, Holmes, Issaquena, Jones, Kemper, Lauderdale, Leake, Pontotoc, Sharkey, Warren, Washington, Winston, and Yazoo Counties. (Clay Lyle, July 19)

In the Delta Counties boll weevils were found in 42% of the fields examined as compared to 36% last week. The average percent of squares punctured in the infested fields increased from 13% to 15.6%. Of the 486 fields examined in Mississippi 292 were on Delta farms in 19 counties. No boll weevils were found in 170 Delta fields including all of the 62 fields examined by entomologists in Bolivar, Grenada, Humphreys, Sunflower, Tallahatchie, Tate, and Tunica Counties. In 69 of the infested fields not more than 10% of the squares were punctured; in 33 fields the infestations ranged between 11 and 25%; and in 14 fields between 26 and 50% punctured squares. Nine Delta fields in Warren, Washington, and Yazoo Counties had more than 50% punctured squares as compared to 1 field in Yazoo County last week. B. J. Young, Delta and Pine Land Company in the southern part of Bolivar County, reports boll weevils in 132 of the 145 fields examined, but no field had more than 12% of the squares punctured.

GEORGIA: The boll weevil infestations remain low in all sections of the State. On only 5 of the 82 fields examined in 21 counties were more than 25% of the squares punctured. Two of these fields are in Tift County and the others are in Irwin, Pilse and Turner Counties. In 61 infested fields 10% or less of the squares were punctured and in 15 fields the infestations ranged from 11 to 25% punctured squares.

SOUTH CAROLINA: Rains and mild temperatures throughout the State were very favorable for weevil development and weevils are emerging from cotton squares in many fields. The average infestation in 107 fields in 24 counties was 29% punctured squares as compared to 23% the previous week and 37% a year ago. In 12 fields the infestations ranged up to 10%; in 63 fields from 11 to 25%; in 26 fields from 26 to 50%, and in 6 fields in Florence and Clarendon Counties more than 50% of the squares were punctured.

NORTH CAROLINA: Weather conditions have been favorable for boll weevils and unfavorable for cotton. There has been a decided increase in weevil infestations. The average infestation in 124 fields in 19 counties was 10% punctured squares as compared to 7% last week. No weevils or punctured squares were found in 12 fields as compared to 30 fields last week. In 73 infested fields not more than 10% of the squares were punctured. In 31 fields the infestations ranged from 11 to 25% punctured squares. There were 24 fields in which more than 25% of the squares were punctured - all of them in five counties, Cumberland, Hoke, Robeson, Sampson, and Scotland Counties. In Robeson County the average infestation in 11 fields examined was 38% punctured squares and in Scotland County the average in 9 fields examined was over 34% punctured squares (J. T. Conner. Jr. July 19)

COTTON FLEAHOPPER, TARNISHED PLANT BUG
RAPID PLANT BUG, AND OTHER MIRIDAE

TEXAS: There was a general increase in cotton fleahopper infestation in the northwestern portion of the State but in central and south central areas the infestation remained about the same as the previous week. The average infestation in 615 fields throughout the State was 10 cotton fleahoppers per 100 terminals as compared to 8 last week.

OKLAHOMA: Cotton fleahopper infestation remains low in most cotton fields. The average infestation in 130 fields in 19 counties was 2 per 100 terminals. Only 7 fields in Cleveland, Pattawatomie, and Carter Counties had more than 10 fleahoppers per 100 terminal buds.

ARKANSAS: Tarnished plant bugs were reported present in most of the fields where weevil counts were made. However, the number of fields where cotton was not setting a normal crop due to mirids is much smaller than a week ago.

LOUISIANA: Tarnished plant bugs, both adult and nymphs, were reported in many fields. Tarnished plant bugs were reported in 72 fields, but they were not present in sufficient numbers to justify control.

BOLLWORM

TEXAS: The rank succulent growth of cotton throughout most central Texas counties following recent rains has been extremely favorable for bollworms. The bollworm has become a serious menace in many cotton fields in south central, central and north central areas. Many farmers are dusting with insecticides for their control.

OKLAHOMA: Bollworm eggs are present in most all fields of early planted cotton and in a few instances worms one-half inch in length have been noted. (C. F. Stiles, July 17)

LOUISIANA: Very few bollworms and bollworm eggs were reported.

MISSISSIPPI: Slight bollworm damage was reported in the Delta section of the State.

NORTH CAROLINA: Slight bollworm damage was observed in many cotton fields in the northern counties. (J. T. Conner, Jr., July 17)

COTTON LEAFWORM

TEXAS: Cotton leafworms have been reported in seven counties: Refugio, Hidalgo, Calhoun, Jackson, San Patricio, Victoria, and Maverick Counties. The build-up in populations has been slow. Insecticides for leafworm control are being used in Calhoun County.

MISCELLANEOUS INSECTS

TEXAS: Grasshoppers continue to cause damage to cultivated crops in the central portion of the State and control measures are being applied.

MISSISSIPPI: Grasshoppers have caused some damage in several cotton fields along the Mississippi levee and on black land near ditches in Bolivar County. The hoppers are being held in check by the use of insecticides.

GEORGIA: The southern grassworm or fall armyworm, Laphygna frugiperda is reported in southwest Georgia as causing serious damage to pastures, lawns, corn, millet, sudan grass, and peanuts. Reports of some injury to cotton have come from Brooks, Colquitt, Randolph, Seminole, and Thomas Counties.

NORTH CAROLINA: Red spider damage was observed in some cotton fields in Edgecomb and Wilson Counties (J. T. Connor, Jr., July 17.)

VIRGINIA: The lepidopterous larvae mentioned in last week's report as destroying cotton squares in Nansemond County were determined by H. W. Capps as the tobacco budworm, Heliothis virescens (F).

LOUISIANA: The corn silk beetle - (Luperodes brunneus) (Cr.) Although the common name of this insect indicates it is primarily a pest of corn, it is often a serious pest of cotton. It is at times a pest of cotton in all of the southeastern States. Entomologists, county agricultural agents, and cotton growers are urged to be on the lookout for this small beetle. All specimens collected should be submitted for identificationsto the Division of Cotton Insects, Bureau of Entomology and Plant Quarantine, Washington 25, D. C. with all available information as to their abundance, distribution, host plants, and time of appearance. On July 12, C. E. Smith, Entomologist, Baton Rouge, reported concerning the corn silk beetle: "Damaging infestations reported on corn and vegetable crops by Charles C. Moss, Vocational Agricultural teacher, from Jackson Parish. The outbreak centered around Chatham, Louisiana. This vicinity is a little north to northeast of the area usually infested with this insect." In 1947 the only reports regarding this insect were received from South Carolina and Georgia.

INSECTS ON IRRIGATED COTTON OF THE SOUTHWEST

ARIZONA: In general the injurious hemipterous insect populations in the Salt River Valley were lower than the previous week due largely to the use of insecticides. In all of the cotton areas observed growers are having their cotton dusted or sprayed as soon as injurious insects reach the damaging point. Good results have been obtained in all fields examined.

In Pinal County the injurious hemipterous insect populations were generally low but were present in a few fields in sufficient numbers to warrant control. Many growers are dusting alfalfa fields to prevent insect migration to cotton fields.

Hemipterous insect populations continue low in the Santa Cruz Valley. The C ortaro Farms Company in the Marana area is dusting several thousand acres of cotton for beet armyworm control. This is the third dusting necessary for th the control of these worms this season.

NEW MEXICO: In general the injurious hemipterous insect populations in cotton fields in the Pecos Valley are low. There was some increase in population in Eddy County. Bollworms are becoming general over the valley and much dusting is being done for their control.

TEXAS: Sweepings made in the El Paso Valley average 2 injurious hemipterous insects per 100 net strokes ranging from 0 to 17. Several cotton fields were dusted for insect control during the week. Bollworms were reported in damaging numbers in the Presidio and Pecos Valleys. A considerable amount of poison has been applied for their control in the Presidio Valley; and in the vicinity of Pecos, Barstow, and Fort Stockton, in the Pecos Valley.

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